

the top of the water, and by degrees it began to move, and after flew about the Glas a perfect Gnat.

I have been the more particular, and large in the relation of the transformation of divers of these little Animals which I observ'd, because I have not found that any Authour has observ'd the like; and because the thing it self is so strange and heterogeneous from the usual progress of other Animals, that I judge it may not onely be pleasant, but very usefull and necessary towards the compleating of Natural History.

There is indeed in *Piso*, a very odd History, which this relation may make the more probable; and that is in the 2. Chapter of the 4. Book of his Natural History of *Brasil*, where he says, *Porro præter tot documenta fertilitatis circa vegetabilia & sensitiva marina telluris æmula, accidit & illud, quod paucis à Paranambucensi milliaribus piscatoris uncum citra intentionem contingat insigi vadis petrosis, & loco piscis spongia, coralla, aliasque arbusculas marinas capi. Inter hæc inusitata formæ prodiit spongiosa arbuscula, sesquipedis longitudinis, brevioribus radicibus, lapideis nitens vadis, & rupibus infixa, erigiturque in corpus spongiosum molle oblongum rotundum turbinatum: intus miris cancellis & alveis fabricatum, extus autem tenaci glutine instar Apum propolis undique vestitum, ostio satis patulo & profundo in summitate relicto, sicut ex altera iconum probe depicta videre licet* (see the third and fourth Figures of the 27. Scheme.) *Ita ut Apiarium marinum vere dixeris; primo enim intuitu è Mare ad Terram delatum, vermiculis scatebat cæruleis parvis, qui mox à calore solis in Muscas, vel Apes potius, easque; exiguas & nigras transformebantur, circumvolantesque evanescebant, ita ut de eorum mellificatione nihil certi conspici datum fuerit, cum tamen cærosa materia propolis Apumque cellæ manifeste apparerent, atque ipsa mellis qualiscunque substantia proculdubio urinatoribus patebit, ubi curiosius inquisiverint hæc apiaria, eaque in natali solo & salo diversis temporibus penitus lustrarint.*

Which History contains things sufficiently strange to be consider'd, as whether the husk were a Plant, growing at the bottom of the Sea before, of it self, out of whose putrifaction might be generated these strange kind of Magots; or whether the seed of certain Bees, sinking to the bottom, might there naturally form it self that vegetable hive, and take root; or, whether it might not be placed there by some diving Fly; or, whether it might not be some peculiar propriety of that Plant, whereby it might ripen or form its vegetable juice into an Animal substance; or, whether it may not be of the nature of a Sponge, or rather a Sponge of the nature of this, according to some of those relations and conjectures I formerly made of that body, is a matter very difficult to be determined. But indeed, in this description, the Excellent *Piso* has not been sufficiently particular in the setting down the whole process, as it were to be wish'd: There are indeed very odd progresses in the production of several kinds of Insects, which are not less instructive then pleasant, several of which, the diligent *Goedartius* has carefully observ'd and recorded, but among all his Observations, he has none like this, though that of the *Hemerobius* be somewhat of this kind, which is added as an Appendix by *Johannes Mey.*

I have

I have, for my own particular, besides several of those mention'd by him, observ'd divers other circumstances, perhaps, not much taken notice of, though very common, which do indeed afford us a very *coercive* argument to admire the goodness and providence of the infinitely wise Creator in his most excellent contrivances and dispensations. I have observ'd, at several times of the Summer, that many of the leaves of divers Plants have been spotted, or, as it were scabbed, and looking on the undersides of those of them that have been but a little irregular, I have perceiv'd them to be sprinkled with divers sorts of little Eggs, which letting alone, I have found by degrees to grow bigger, and become little Worms with leggs, but still to keep their former places, and those places of the leaves, of their own accords, to be grown very protuberant upwards, and very hollow, and arched underneath, whereby those young creatures are, as it were, shelter'd and housed from external injury; divers leaves I have observ'd to grow and swell so farr, as at length perfectly to inclose the Animal, which, by other observations I have made, I guess to contain it, and become, as it were a womb to it, so long, till it be fit and prepar'd to be translated into another state, at what time, like (what they say of) Vipers, they gnaw their way through the womb that bred them; divers of these kinds I have met with upon Gooseberry leaves, Rose-tree leaves, Willow leaves, and many other kinds.

There are often to be found upon Rose-trees and Brier bushes, little red tufts, which are certain knobs or excrescencies, growing out from the Rind, or barks of those kinds of Plants, they are cover'd with strange kinds of threads or red hairs, which feel very soft, and look not unpleasantly. In most of these, if it has no hole in it, you shall find certain little Worms, which I suppose to be the causes of their production; for when that Worm has eat its way through, they, having performed what they were design'd by Nature to do, by degrees die and wither away.

Now, the manner of their production, I suppose to be thus; that the All-wise Creator has as well implanted in every creature a faculty of knowing what place is convenient for the hatching, nutrition, and preservation of their Eggs and of-springs, whereby they are stimulated and directed to convenient places, which become, as 'twere the wombs that perform those offices: As he has also suited and adapted a property to those places whereby they grow and inclose those seeds, and having inclosed them, provide a convenient nourishment for them, but as soon as they have done the office of a womb, they die and wither.

The progress of inclosure I have often observ'd in leaves, which in those places where those seeds have been cast, have by degrees swell'd and inclos'd them, so perfectly round, as not to leave any perceptible passage out.

From this same cause, I suppose that Galls, Oak-apples, and several other productions of that kind, upon the branches and leaves of Trees, have their original; for if you open any of them, when almost ripe, you shall find a little Worm in them. Thus, if you open never so many dry Galls, you shall find either a hole whereby the Worm has eat its passage out,